

CLAIMS

1. A stainless steel tube for a automobile structure member having excellent formability for secondary operation comprising:

a chemical composition including not more than 0.20 mass % of C; not more than 1.5 mass % of Si; not more than 2.0 mass % of Mn; 10-18 mass % of Cr; not more than 0.03 mass % of N; Fe as the remainder and the inevitable impurities; and

a structure which is constituted of ferrite or ferrite and martensite, wherein the TE value defined by the following formula (1) exceeds 25,000 MPa·%.

$$\text{TE value} = \text{TS} \times (\text{El} + 21.9) \quad (1)$$

In the aforementioned formula, TS represents the tensile strength in the tube axial direction (MPa), and El represents the elongation in the tube axial direction (%).

2. A stainless steel tube according to claim 1, wherein the Lankford value preferably exceeds 0.5.

3. A stainless steel tube according to claim 1 or 2, wherein the diameter of ferrite grain is preferably not more than 8 μm .

4. A stainless steel tube according to any one of claims 1 to 3, wherein the area ratio of said martensite is not more than 30 %.

5. A stainless steel tube according to any one of claims 1 to 4, further comprising, in addition to the aforementioned chemical composition, at least one type of element selected from the group consisting of: not more than 0.6 mass % of Cu; not more than 0.6 mass % of Ni; not more than 2.5 mass % of Mo; not more than 1.0 mass % of Nb; not more than 1.0 mass % of Ti; and not

more than 1.0 mass % of V.

6. A automobile structure member having excellent fatigue resistance property, which member is produced by subjecting the stainless steel tube of any one of claims 1 to 5 to a secondary forming treatment and a heat refining treatment so that the tensile strength thereof becomes not smaller than 800 MPa.